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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
NGUYEN, HANH N	
ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	09/766,267	TONG ET AL.
	Examiner	Art Unit
	Hanh Nguyen	2668

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Appeal Brief filed on 10/10/07*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15 and 17-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *24* is/are allowed.

6)☒ Claim(s) *1-6,8-13 and 15-23* is/are rejected.

7)☒ Claim(s) *7 and 14* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

In view of the Appeal Brief filed on 10/10/07, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

LYNN FEILD
SUPERVISORY PATENT EXAMINER

Claim Rejections - 35 USC § 101

Regarding claim 21, Applicant 's argument on the statutory of this claim is persuasive. Therefore, the 101 statutory rejection of claim 21 is withdrawn.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 8, 15, 21, 22, 23 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 29, 30, 31, 32 of U.S. Patent No. 6,956,835 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1, 29, 30, 31, 32 of the Patent discloses the same subject matter as shown in claims 1, 8, 15, 21, 22 and 23 of the application except that the patent does not explicitly discloses transmitting communications in time division multiplex super frames between the base station and the the plurality of user terminals. However, in the Patent, plurality of carrriers are used to transmit communications between the base station and the user terminals, wherein the carriers correspond to frames transmitted in subsequence to user terminals. Therefore, it would have been obvious in the patent that the method of transmitting data in time division multilexes frames is implied.

Claims 1-15, 17-24 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7, 9, 10, 11, 13- 28, 30, 31, 32, 33 of copending Application No. 09/766,261. Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matters of the application and of the patent are almost the same, except that the patent discloses the high speed data frame carries voice and data while the frame in the application carries at least one data communication. It is well-known in the art that whether it is voice or data carried in the frame, the voice are data are at least one data communication in the frame. Further, the patent does not disclose at least one rate indication is included in the high speed data frame. One skilled in the art can understand the patent that the voice and data are transmitted in the high speed data frame should have respective transmission rates.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Objections

Claim 4 is objected to because of the following informalities: According to MPEP, "their" on line 2 is not used as claimed language because it does not include clear meaning as to whether "their transmission" prefers to "frame or superframe or data rate or data communication " . Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 20 recites the limitation "a transmitting base station " in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 20 depends on claim 19 which further depend on independent claim 15. Is " a transmitting base station" in claim 20 referred to " a base station" on line 4 of claim 15.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 3, 8, 9,10, 15 and 21-23 are rejected under 35 USC 103(a) as being unpatentable over Mochizuki (US pat. 6,628,633 B1) in view of Roobol et al. (US pat. No. 6,307,867 B1).

In claims 1, 8, 15 and 21-23 , Mochizuki a method for operating a base station to wirelessly transmit data communications to a plurality of users terminal (see fig.1& fig.5, col.8, lines 15-30; base station 204 transmits forward packets to mobile terminals 1 & 2); repeatedly and sequentially wirelessly transmitting time division multiplexed superframes, each superframe comprises data frames (see fig.5, transmitting frames

T1-T5 to mobile terminal 1&2); each frame carries at least one data communication; containing a respective indication of at least one user terminal for which the at least one data communication is intended; and a respective indication of at least one data rate of high speed data frame (as shown in fig.5, col.8, lines 22-30; frame T1 indicates data for terminals 1 & 2 at rate 1; frame T4 indicates data for terminal 2 at rate 3; further in col.7, lines 28-32; forward packet has a destination address corresponds to a destination terminal ID). However, the transmit rates R1, R2, R3 before being transmitted to mobile terminals are spreaded with different codes (see fig.4; col.7, lines 45-60) and the mobile terminals have to despread the forward signals using the forward spreading codes to determine corresponding transmission rates R1-R3. (see col.8, lines 60-63). Mochizuki further discloses the base station (as shown in fig.8) comprising an antenna 501(antenna); circular 502 coupled to the antenna 501(RF unit coupled to the antenna); packet control apparatus 530 (at least one digital processor).

Roobol et al. discloses, in fig.2, a communication device 1 transmits data at variable rates in a plurality of fixed size data blocks wirelessly via radio link 5 to communication device 6 (see fig.2, col.42-55 and abstract; transmitting time division multiplexed frames containing data information). In particular, fig.5 showns that there are at least one fixed size data block (at least one data frame) has 320 bits (data communication) transmitted at 32kbit/s (respective indication of at least onme data rate) to communication device 6. See col.5, lines 30-42. Therefore, it would have been obvious to one ordinary skilled in the art to apply the respective rate indications (32kbits/s) shown in Roobol et al. as respective rate indication in the at least one data

frame of Mochizuki for forward transmissions so that the mobile terminals, when receiving the data frames, do not have to despread the forward signals to determine the transmitted data rates because the transmitted data rates are indicated in the frames.

*In claims 2 and 9, the limitation supporting a plurality of data rates within high peed data frame has been addressed in claim 1.

*In claims 3 and 10, Mochizuki discloses modulation schemes in high speed data frame (see fig.8, transmiter 560 modulates a carrier to produce a modulated forward signal as the transmission signal (see col.10, lines 50-60). Roobol et al. discloses different coding types such as convolution, Reed-solomon and differentbtransmission rates (coding rates). See col.7, lines 12-20. Therefore, it would have been obvious combine the coding rates with modulation forward signal in Mochizuki to transmit correct data over a plurality of frames to a plurality of mobiles.

Claims 6, 13, 19 and 20 are rejected under 35 USC 103(a) as being unpatentable over Mochizuki (US pat. 6,628,633 B1) in view of Roobol et al. (US pat. No. 6,307,867 B1), and further in view of Ue et al. (US pat. 6,597,894 B1).

*In claims 6, 13 and 19, Mochizuki does not disclose a pilot signal, and reverse link power control bits intended for user terminals. Ue et al. discloses, in fig.6,a data frame used by a base station (fig.1) for transmission to a communication terminal (fig.2) includes pilot symbol (pilot signal) and control information. The control information is indicated as desired power measured in fig.4, by a power measurement circuit 403 (

see col.4, lines 35-60). Therefore, it would have been obvious to usethe teaching of Ue into Mochizuki to improve signal quality between the base station and mobile stations.

*IN claim 20, Mochizuki and Roobol et al. do not disclose receiving a channel quality indication based upon the received pilot signal and reporting the channel quality indicator to a transmitting base station. Ue et al. discloses in an abstract and fi.6, col.5, lines 45-65, a communication terminal measures reception quality from base sration and reports the measurement result to the base station. The base station switches transmission rate based on the reported result of the reception quality from the mobile. Therefore, it would have been obvious to one skilled in the art to apply the signal quality measurment into Mochizuki to assign a correspondence data rate for transmission over frames to mobile terminal.

Claims 4, 11, 17 are rejected under 35 USC 103(a) as being unpatentble over over Mochizuki (US pat. 6,628,633 B1) in view of Roobol et al. (US pat. No. 6,307,867 B1), and further in view of Rydbeck et al. (US Pat. No.6,332,006 B1),

*In claims 4, 11 and 17, The combination of Mochizuki and Roobol et al disclose different types of coding including Reed-Solomon, convolution codings with different data rates (see Roobol et al., col.7, lines 10-20), but do not specifically disclose coding frames with Walsh codes. Rydbeck et al. discloses, in Fig.6a, a base station 610 encodes data message (high rate data), voice messages (low rate data) by a convolution coding, Walsh coding (coding message by first coding type, second coding type) before transmitting to subscriber 650. The encoded messages is Pi/4-DQPSK

modulated before being transmitted to the subscriber 650 (modulating scheme). See col.10, lines 5-25 & col.11, lines 35-45. Therefore, it would have been obvious to one ordinary skilled in the art to combine the encoding methods of Rydbeck et al. into the combination of Mochizuki and Roobol et al. in order to reduce error and protect confidential data from being detected by undesired receivers.

Claims 5, 12 and 18 are rejected under 35 USC 103(a) as being unpatentble over over Mochizuki (US pat. 6,628,633 B1) in view of Roobol et al. (US pat. No. 6,307,867 B1), and further in view of Kleider et al. (US Pat. No.6,496,794 B1).

IN claims 5, 12, The combination of Mochizuki and Roobol et al. discloses coding data using different coding schemes such as convolution, Reed-solomon, etc,. and different transmission rates (see Roobol et al. at col.7, lines 15-20; coding data communication using a first coding type); but does not disclosecoding respective indicator of data frame using a second different coding type. Kleider et al. discloses in fig.1,. frames of coded speech are produced by multi-rate source coder 102 such as each respective frame is coded with a different coding rate. The source coder 102 includes multiple type of speech coders (see col.2, lines 35 to col.3, line 30 and table 1; coding the respective indicator of data frame using a second coding type). Therefore, it would have been obvious to use the frame coding into the combination of of Mochizuki and Roobol et al. for transmission respective frame with respective coding type and data with respective coding type to mobile terminal.

In claim 18, the steps of determining high speed data frame is intended for user; receiving a data communication contained in the data frame; and decoding data

communications using a different coding type have been addressed in claims 1, 8 and 15 by the Mochizuki and Roobol et al.. However, by meeting the missing step of decoding the respective indication contained in a high speed data frame using a first coding type. Kleider et al. further discloses in fig.1, col.4, lines 35-45, a multi-rate source decoder 130 decodes frames of coded speech received from transmitter 112 to produce speech 136. Therefore, it would have been obvious to use the frame decoding into the combination of Mochizuki and Roobol et al. to help mobile terminal receive correct data and frames.

Allowable Subject Matter

The indicated allowability of claims 5, 12, 18 are withdrawn in view of the newly discovered reference(s) to Kleider et al. (Us pat. 6,496,794 B1). Rejections based on the newly cited reference(s) follow.

Claims 7, 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In claims 7 and 14, the prior art does not disclose a high speed data frame including a secondary explicit data rate indicator indicating a user terminal of the

plurality of user terminals for which a second portion of the high speed data frame is intended.

Claim 24 is allowed over the prior art.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Raleigh et al. (US pat. 6,463,096 B1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 571 272 3092. The examiner can normally be reached on Monday-Friday from 8:30 to 4:30. The examiner can also be reached on alternate

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild, can be reached on 571 272 2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hanh Nguyen

HANH NGUYEN
PRIMARY EXAMINER